A1−3.0 Consultation to Date

The U.S. Nuclear Regulatory Commission (NRC) initiated consultation on the remediation of the Moab uranium mill tailings pile during preparation of a previous EIS (NRC 1999). For that EIS, NRC prepared a BA in 1995 that concluded endangered fish species could be exposed to potentially toxic levels of site-related contaminants. The BA also concluded that remediation of the tailings pile could disturb breeding activities for the southwestern willow flycatcher, if this species were present in the vicinity of the millsite.

NRC updated its BA in 1997. In this revision, it was determined that ammonia was at potentially toxic levels where site ground water entered the river and that this constituent could adversely affect endangered fish. The updated BA further evaluated the potential for the southwestern willow flycatcher and peregrine falcon to be adversely affected by selenium and mercury. The results were inconclusive.

USF&WS issued its Final Biological Opinion in July 1998. At that time, it was the Service's opinion that capping the pile in place would jeopardize the continued existence of the razorback sucker and Colorado pikeminnow due to continued leaching of contaminants (primarily ammonia) into the Colorado River, water depletion in the river, and adverse modification of designated critical habitat. This opinion was based primarily on the lack of a ground water corrective action plan. It provided a set of reasonable and prudent measures that would help to minimize these adverse impacts. USF&WS also concluded that the proposed action would not jeopardize the southwestern willow flycatcher and provided prudent measures to minimize take of that species. The peregrine falcon was not addressed in the Biological Opinion.

NRC published its final EIS in 1999. However, responsibility for cleanup of the Moab tailings pile was transferred, by act of Congress, to DOE in October 2000 (Floyd D Spence Act, Public Law 106-398). In February 2001, based on circumstances that pre-dated transfer of the site to DOE, USF&WS rescinded its Final Biological Opinion. Since DOE acquired responsibility for the Moab site, many activities, including characterization, maintenance and operational activities, and interim actions, have taken place. Before implementing these actions, DOE consulted regularly with USF&WS concerning threatened and endangered species that may be affected by these activities. These consultations, and DOE determinations, resulted in concurrences by USF&WS dated March 23, 2001, September 12, 2001, January 22, 2002, and April 5, 2004. In all cases, it was determined that these actions would not jeopardize the continued existence of any aquatic or terrestrial threatened or endangered species.

In support of the preparation of the draft EIS for remediation of the Moab site, DOE sent a request for information to USF&WS in March 2003. USF&WS responded in April 2003 with an updated list of threatened, endangered, proposed, and candidate species that may occur in the potentially affected areas under the various alternatives.

On April 24, 2003, DOE and USF&WS met in Salt Lake City to discuss the BA approach and scope. This meeting also included discussions regarding options for preparing a biological opinion prior to identifying a preferred alternative.

A teleconference with USF&WS, DOE, the U.S. Environmental Protection Agency (EPA), and the Utah Department of Environmental Quality took place on July 9, 2003, to discuss the applicable numeric ammonia criteria.

On August 25, 2003, USF&WS and DOE met in Salt Lake City to further discuss applicable risk-based criteria and standards that would be protective of endangered fish. On November 3, 2003, the draft BA was forwarded to USF&WS for comment. DOE received initial comments on the BA in early December 2003. Following receipt of the comments, a meeting was held on December 15, 2003. Additional comments were received in early January 2004, followed by telephone conferences to clarify issues and concerns.

On April 14, 2004, DOE submitted the final draft BA to USF&WS. In June through August 2004, DOE and USF&WS consulted extensively to resolve final comments on this document.

On August 10, 2004, DOE received formal comments on the final draft BA.

A1−4.0 Description of the Proposed Action

DOE is proposing to remediate contaminated soils and materials and contaminated ground water at the Moab site. DOE will identify a preferred alternative prior to issuance of the EIS Record of Decision (ROD). Three alternatives are presented in the EIS:

- On-site disposal of tailings
- Off-site disposal of tailings (three locations, three transportation options considered)
- No action

On-site disposal of tailings is discussed in Section A1−4.1. Off-site disposal of tailings is discussed in Section A1−4.2. Active ground water remediation is proposed for both the on-site and off-site alternatives (Section A1−4.3.1). This BA places emphasis on ground water remediation due to contamination entering the Colorado River, which is designated critical habitat for four endangered fish species. The remediation goals (Section A1−4.3.2) are to reduce concentrations of five contaminants reaching the Colorado River to acceptable risk levels within 10 years of the ROD. Emphasis is placed on remediation of ammonia, which is the primary contaminant of concern. DOE implemented initial and interim actions (Section A1−4.3.3) in 2003 and 2004 in an attempt to begin reducing ammonia concentrations prior to full implementation of proposed ground water remediation.

DOE also analyzes the No Action alternative (Section 2.4 of the EIS), which serves as a baseline for comparing all alternatives, as required by NEPA regulation.

A1−4.1 On-Site (Moab) Remedial Actions

Under the on-site disposal alternative (Section A1−2.1 of the EIS), the existing tailings pile would be converted into a permanent, engineered, disposal cell into which all on-site and vicinity property contaminated material would be encapsulated. Upon completion of excavation and placement of all contaminated material, the disposal cell would be stabilized, recontoured, and